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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,443	02/26/2002	Farshid Ahmady	SLN-101-A	6029

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EXAMINER

COCKS, JOSIAH C

ART UNIT	PAPER NUMBER
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3749

DATE MAILED: 03/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/083,443

Applicant(s)

AHMADY, FARSHID

Examiner

Josiah Cocks

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 and 18 is/are allowed.
- 6) ☒ Claim(s) 2-17, 19, and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Receipt of applicant's amendment filed 1/5/04 is acknowledged.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2-11, 19, and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2-11 recites the limitation "The improvement" in line 1 of each claim. There is insufficient antecedent basis for this limitation in the claim. Applicant has not identified an "improvement." For the purpose of an examination on the merits, the claims have been regarded as reciting "The radiant heating system" as was originally presented.

Claims 19 and 20 are indicated as being dependent upon claim 22. Applicant has not presented a claim 22. For the purpose of an examination on the merits, claims 19 and 20 have been regarded as being dependent upon claim 18 as was originally presented.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Johnson* (US # 4,727,854) (hereinafter "*Johnson '854*") in view of *Cowan* (US # 3,805,763).

Johnson '854 discloses in Figures 1 a radiant heating system similar to that described in applicant's claims 12-17 including a gas burner (10), and a tube (22) and a reflector (24) forming a conduit that is connected to the burner and to an exhaust tube (see Fig. 1). *Johnson '854* also recognizes that "hot spots" are a concern in a radiant heater of this type and proposes a solution in creating a reverse peak (69) to minimize the hot spots (see col. 5, lines 25-49). However, *Johnson '854* also discloses an embodiment of his heater that does not include the reverse peak (see Fig. 2). A person of ordinary skill in the art would understand from this disclosure that undesirable hot spots would result in the embodiment illustrated in Fig. 2. The examiner also notes that the burner structure of *Johnson '854* is substantially identical to applicant's burner structure and that of the prior art Fig. 1. Applicant notes in the background section of the specification that it is understood in the art that burners in the industry (such as that of *Johnson '854*) are understood to develop undesirably high surface temperatures (i.e. "hot spots"). A person of ordinary skill in the art would also understand from the prior art disclosed by applicant that the conduit of the burner of *Johnson '854* would include undesirable "hot spots."

Johnson '854 further discloses the use of a thermostat and temperature sensor that function to control the burner (note Fig. 1 and the disclosure of U.S. Patent No. 4,716,883 which *Johnson '854* incorporates by reference).

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Johnson '854 does not disclose the use of a fan for directing a cooling airflow against the hotspot of the conduit.

Cowan teaches a radiant heating system in the same field of endeavor as *Johnson '854* wherein the system of *Cowan* includes a fan assembly (41) that is positioned to direct cooling air into the outer casing of a radiant tube (see col. 4, lines 37-47). The fan directs cooling air into chamber (11) that surrounds conduit (12) (see col. 4, lines 47-64).

Therefore, in regard to claims 12-17, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the system of *Johnson '854* to incorporate the cooling fan assembly of *Cowan* as this fan assembly desirably serves to minimize any rise in temperature of an outer casing/conduit (see *Cowan*, col. 4, lines 43-47). Such rises in temperature/hot spots are acknowledged by *Johnson '854* to be undesirable (see *Johnson '854*, col. 5, lines 25-49).

Allowable Subject Matter

6. Claims 1 and 18 are allowed.

7. Claims 2-11, 19, and 20 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Josiah Cocks whose telephone number is (703) 305-0450. The examiner can normally be reached on weekdays from 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus, can be reached at (703) 308-1935. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

jcc
March 10, 2004


JOSIAH COCKS
PATENT EXAMINER
ART UNIT 3749